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Being ‘Them’ and ‘Us’ at the Same Time? Subgroups of Cultural Identification Change among Adolescent Diaspora Immigrants

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Abstract: Recent research suggests that cultural groups comprise subgroups differing in the combination of their self-identifications with their heritage and host cultures and following distinct trajectories of acculturation. This study aimed at identifying such subgroups, predicting group membership by pre-migration factors, and testing for acculturation-related experiences with the host culture over time. The sample comprised 366 adolescent diaspora migrants (59% female, 16 years old) from the former Soviet Union to Germany. A person-oriented and longitudinal approach using growth mixture modeling revealed three subtypes of cultural identification change. The first subgroup (Idealists) comprised adolescents with high and stable identification with their host culture and low but increasing identification with their heritage culture. The second group (Skeptics) showed low and stable identification with their host culture and high but decreasing identification with their heritage culture. The third group (Realists) reported medium-level and stable identification with both host and heritage cultures. Group comparisons showed pre-migration differences: Idealists and Realists most likely spoke the host-culture language (i.e., German) as a native language and Idealists reported the highest level of maternal education. Membership in subgroups also related to adolescents' perception of their current situation in the host culture: Idealists reported less acculturation-related hassles with respect to language and socio-cultural adaptation. Skeptics perceived lower expectations by natives to get in contact with natives and higher expectations to spend time with members of their immigrant group than the average immigrant. Results highlight the heterogeneity in immigrant populations and their specific needs before and after the actual migration.

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Being ‘Them’ and ‘Us’ at the Same Time?

Subgroups of Cultural Identification Change among Adolescent Diaspora Immigrants

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Abstract

Recent research suggests that cultural groups may be comprised of subgroups of individuals differing in the combination of their self-identifications with their heritage and with their host cultures and that these subgroups follow distinct trajectories of acculturation. This study is aimed at identifying such subgroups, at predicting group membership by pre-migration factors, and at testing for their acculturation-related experiences with the host culture over time. The sample was comprised of 366 adolescent diaspora migrants (59% female, 16 years old) from the former Soviet Union to Germany. A person-oriented and longitudinal approach using growth mixture modeling revealed three subtypes of change in cultural identification. The first subgroup (Idealists) was comprised of adolescents with high and stable identification with their host culture and low but increasing identification with their heritage culture. The second group (Skeptics) showed low and stable identification with their host culture and high but decreasing identification with their heritage culture. The third group (Realists) reported a medium level and stable identification with both their host and heritage cultures. Group comparisons showed pre-migration differences: Idealists and Realists most likely spoke the host-culture language (i.e., German) as a native language and Idealists reported the highest level of maternal education. Membership in subgroups was also related to the adolescents' perception of their current situation in the host culture: Idealists reported less acculturation-related hassles with respect to language and to socio-cultural adaptation. Skeptics perceived lower expectations by natives to get in contact with natives and higher expectations to spend time with members of their immigrant group than the average immigrant. Results highlight the heterogeneity in immigrant populations and their specific needs before and after the actual migration.

Keywords: cultural identification, pre-migration factors, acculturation-related hassles, acculturation expectations, adolescents, diaspora immigrants, longitudinal growth mixture analysis

Being 'Them' and 'Us' at the Same Time?

Subgroups of Cultural Identification Change among Adolescent Diaspora Immigrants

Individuals who move from one culture to another have to deal with the issue of whether or not they regard themselves as members of their respective heritage and host cultures (Berry, 2004; Phinney, 1990). Such cultural identifications have been found to be associated with immigrants' socio-cultural and psychological adaptation to a new context, such as peer relations and discrimination experiences (Herman, 2004), anxiety, depressive symptoms, and positive well-being (Yip & Fuligni, 2002). Thus it is not surprising that researchers have started to investigate the processes underlying cultural identification changes (Eschbach & Gómez, 1998; Fuligni, Kiang, Witkow, & Baldelomar, 2008; Hitlin, Brown, & Elder, 2006). However, several questions remain open. One such issue is whether subgroups exist among immigrants that differ in the combination of heritage and host cultural self-identifications over time. Identifying such subgroups would be essential to help tackle specific needs and to avoid an overgeneralization of research findings, which may come across as stigmatization or even discrimination. A second question is whether membership in these subgroups is rooted in the situation prior to the actual transition from one country to another. For example, immigrants' pre-migration identification with the heritage culture has been shown to predict post-migration cultural identification (Tartakovsky, 2009). Empirical evidence in this regard is, however, still limited. Finally, a third question is whether subgroups of cultural identification differ in how they experience their situation in the new country in terms of daily hassles or intergroup perceptions. Such experiences have a strong impact on psychological well-being and may explain why some immigrants adjust more easily than others.

To answer these questions, we expanded several findings on immigrants' cultural identification. One central finding is that immigrants belong to host and heritage cultures

simultaneously and that identifications with these cultural groups represent two independent dimensions (Berry, 2004; Phinney, 1990). Given that, we were particularly interested in how immigrants combine heritage and host culture identification. Another finding refers to considerable changes in minority and in immigrant youth's cultural identification over time (Eschbach & Gómez, 1998; Hitlin et al., 2006). Such changes may result both from the acculturation process (Berry, 2004; Ward, 2001) and from the normative developmental task of identity development in adolescence (e.g., Erikson, 1968) that also comprises the exploration of one's own cultural and ethnic belonging (e.g., Phinney, 1993). These findings stress the necessity for longitudinal assessments of adolescent immigrants' cultural identification. Finally, the considerable inter-individual variation found in levels and changes of cultural identification (Fuligni et al., 2008) may be seen as the result of individuals' belonging to subgroups of immigrants following different trajectories of adaptation, when these changes are seen in light of well-established acculturation theories (e.g., Berry, 1997). For this reason, we used a person-oriented approach that allows for the identification of such subgroups who differ in their longitudinal patterns of heritage- and host-culture identification.

Ethnic German Diaspora Immigrants from Russia to Germany

Although our research questions are applicable to other immigrant groups, we decided to study first generation ethnic German diaspora immigrants from Russia to Germany (*Aussiedler*). This immigrant group is interesting as diaspora migrants are especially likely to identify not only with the heritage, but also with the host culture even before immigration has taken place. The history of diaspora migration to Germany reaches back to the settlement of Germans during the regency of Katharina II in Russia during the 18th century (Bade & Oltmer, 2003). In this period, ethnic Germans were granted various privileges, such as self-administration and cultural-religious freedom. These privileges facilitated cultural retention and an enduring strong identification with the German homeland. Over the course of World War II, the Russian attitude towards ethnic Germans changed substantially, and they faced

discrimination, resettlement, and a forced adaptation to the Russian culture (Bade & Oltmer, 2003; Dietz, 2000). The result was ethnic Germans adapting to the Russian mainstream culture while simultaneously keeping the idea of being 'German' and maintaining some German cultural practices, especially within the family context (Brenick & Silbereisen, 2012).

The breakdown of state Socialism in the late 1980s was the starting point for large-scale emigration waves from seceding states of the former Soviet Union and from post-Socialist Central and Eastern European states. Today, ethnic German diaspora immigrants constitute the largest immigrant group in Germany, numbering about 4 million and reaching a total population share of about 5%. Germany actively supports diaspora immigration by granting immediate citizenship and by providing social security and material support (Dietz, 2000), thereby providing this immigrant group a privileged status. However, ethnic German diaspora immigrants have been reported to be perceived as 'Russians' (Silbereisen, 2008) and to feel unaccepted (Dietz, 2003) by native Germans.

Subgroups of Cultural Identification Change and Immigrants' Pre-Migration Situation

Our first research question referred to the identification of subgroups among immigrant adolescents with respect to their cultural identification and its changes over time. Although Berry (1997) presented some time ago the idea that cultural groups are comprised of various subgroups of differential psychological functioning, the study of subgroups based on longitudinal patterns of acculturation is quite novel (Huang & Stormshak, 2011; Matsunaga, Hecht, Elek, & Ndiaye, 2010; S. J. Schwartz et al., 2013). The concept of acculturation strategies (Berry, 1997), a prominent example of subgroups, refers to a current state based on host-culture acquisition and heritage-culture retention without describing whether this is a starting point, a momentary status, or the end of the adaptation process. Using longitudinal data for identifying subgroups has the advantage that groups represent different trajectories with respect to the course of their acculturative processes. We aimed our study at contributing to this development in the literature by identifying subgroups of immigrants based on

adolescent immigrants' self-ascribed cultural membership and changes in cultural identification over time.

In our view, however, subgroups cannot be envisaged without taking into account the pre-migration situation of adolescents, as pre-migration factors have been argued to substantially influence the acculturation process and its adaptational outcomes (Berry, 1997): Pre-migration factors define the starting conditions of acculturative processes and also relate to subsequent changes over time. We considered the school years in the former Soviet Union as indicators for adolescents' heritage culture socialization, as the Russian school system certainly left a cultural imprint through their contact with the Russian language, peers, and cultural practices. In addition, ethnic German diaspora immigrant families vary in whether the later host-culture language, German, was already spoken within the family context (Dietz, 2000), which is an indication for adolescents' pre-acculturation in the future host culture prior to immigration. Moreover, parental education and the preparation of children and adolescents for the upcoming migration-related challenges were considered as indicators of families' pre-migration expectations of successful inclusion in the German society, which in turn might have an impact on how adolescents combine heritage- and host-culture identification.

Based on these pre-migration factors, we expected at least three subgroups regarding change in cultural identification in our sample of ethnic German diaspora immigrants from Russia to Germany. For the ease of presentation, we term these subgroups as Idealists, Skeptics, and Realists. These terms refer to the mindset these subgroups of adolescents are expected to start their acculturation process with and should be based on differences in their heritage culture socialization, their pre-acculturation in the future host culture, and families' pre-migration expectations. However, as we pursued a person-oriented – and thus partly explorative approach – our analyses were open to the identification of more than three subgroups. The ICSEY study, for example, identified four subgroups of adolescents differing in their ways of dealing with host and heritage culture (Phinney, Berry, Vedder, & Liebkind,

2006). However, the question remains open as to whether these results can be transferred to our study as the four subgroups in ICSEY were based on cross-sectional data, on a broad range of outcomes, and on several immigrant samples in different host cultures.

The first subgroup we expected to find, the Idealists, should be constituted of those adolescents with a comparatively weak Russian and strong German socialization: We expected these adolescents to have spent fewer years in Russian educational institutions and more likely to speak the host-culture language German as a native language. Moreover, we expected the parents of Idealists to be comparatively highly educated. A higher educational level has been argued to be a personal resource in itself and to ease the process of pre-acculturation into one's new cultural context (Berry, 1997). Accordingly, the higher educated parents of Idealists should have supported the pre-acculturation of their children (e.g., with respect to language) and should have expected a rather smooth adaptation into the host society. Adolescents in this subgroup may also have received less preparation for the immigration to Germany in terms of preparation for upcoming challenges and hassles than other adolescents due to families' expectation of a smooth integration process. We expected these idealistic expectations to be reflected in these adolescents' pattern of cultural identification: After immigration, they were expected to be comparatively high in identification with being 'German' and low in their identification with being 'Russian'. Over time, however, we expected these idealistic expectations to be challenged: Families' high expectations might not always be fulfilled, due to a devaluation of educational degrees obtained in the heritage culture (Kogan, 2011), for example, or to being perceived as 'Russians' rather than as 'Germans' by natives (Silbereisen, 2008). With specific regard to adolescents' situations, the establishment of native peer contacts takes longer than is likely to be expected initially (Titzmann & Silbereisen, 2009). Accordingly, the initial, very high identification with the German culture should decrease, whereas bonds to the Russian heritage

culture should be reconsidered over time and thus the identification with being 'Russian' we expected to increase.

At the same time, we expected a second subgroup, the Skeptics, consisting of those adolescents who were well-integrated into the Russian heritage culture by having attended Russian educational institutions for a longer period of time and who had rather weak bonds to the host culture as indicated by their not speaking German as a native language. Their families should hold comparatively skeptical expectations about their future prospects in the German host society due to a parental education that is lower than in the Idealists group. These adolescents were also expected to have received little preparation that would help raise their awareness of belonging to two cultures. With regard to cultural identification, these adolescents should show a comparatively strong identification with their Russian heritage and, initially, a low identification with their German host culture. Over time, however, their identification as being 'Russian' should decrease and their identification with being 'German' increase because of their attending German socializing institutions (e.g., school) and their slowly increasing contact with native German peers (Titzmann & Silbereisen, 2009).

Finally, we expected a third subgroup of individuals, the Realists, who should be able to integrate both their German roots and their socialization into the Russian culture. This group, we expected to have attended educational institutions in Russia for a longer time period, but at the same time to be likely to speak German as a native language and to have parents with comparatively high educational backgrounds, and to expect a rather successful adaptation process in Germany. In contrast to the other two subgroups, this group was likely to have been prepared for the immigration, which preparation helped them in developing more realistic expectations regarding life in their host culture and in considering both instead of only one cultural belonging even before immigration took place (Mirsky, 2001).

Accordingly, these adolescents could be expected to identify with both cultures. Due to their more realistic expectations concerning the adaptation in Germany, we did not expect this

subgroup of adolescents to face substantial pressure to adapt their cultural identification and thus, changes were less likely in this subgroup.

In summary, for our first research question, we expected to identify at least three subgroups (H1): Idealists should be characterized by comparatively high, but decreasing identification with the German host culture and a low, but increasing identification with the Russian heritage culture. Skeptics should show a pattern of low, but increasing identification with the German host culture and high, but decreasing identification with the Russian heritage culture. Realists should demonstrate high and stable identifications with both the German host and the Russian heritage cultures. With regard to our second research question, we expected cultural identification patterns to be rooted in pre-migration factors and thus subgroups to differ in this regard. Skeptics and Realists should have spent more time in educational institutions in Russia than Idealists (H2); Idealists and Realists should be more likely to speak the host-culture language German as a native language than Skeptics (H3); parents of Idealists and Realists should have a higher educational background than Skeptics (H4); and Realists should be more likely to have been prepared for immigration than Idealists or Skeptics (H5).

Subgroups' Perceived Experiences with the Host Culture

Our third research question addressed whether subgroups who differed in their change of cultural identification perceived their situation in the host culture differently. We expected this association, as theories on intergroup relations (Social Identity Theory, Tajfel & Turner, 1986; Self Categorization Theory, Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) assume that identification with a social group relates to a more positive perception of this group and its members and may also relate to a more negative perception of out-group members. Applying these assumptions to the expected subgroups differing in level and change of cultural identification, we expected subgroups to differ also in levels and change of perceived experiences with the host culture.

We investigated this research question by analyzing adolescents' perceptions of everyday hassles with regard to the new language (Titzmann, Silbereisen, Mesch, & Schmitt-Rodermund, 2011) and to social adaptation (Titzmann, Michel, & Silbereisen, 2010), and to immigrants' perceptions of natives' expectations concerning how immigrants should adjust to the new cultural context (Horenczyk, 1996). Acculturation-related hassles refer to immigrants' individual acculturation experience; perceived acculturation expectations refer to immigrants' perceptions of the attitudes of members in the host culture (i.e., whether immigrants perceive natives to want them to make contact with natives and /or to stay within their own ethno-cultural community); and both are assumed to be central parts of immigrants' acculturation and adaptation process (Berry, 1997).

With respect to acculturation-related hassles, we expected the Idealists' identification pattern with high host-culture and low heritage-culture identification to relate to a more positive perception of their own experiences with the host culture and its members. Accordingly, these adolescents should initially perceive comparatively low levels of acculturation-related hassles. Of Skeptics we expected that a rather critical view of the situation in Germany would be reflected in their initial identification pattern of low host-culture identification and high heritage-culture identification. Therefore, adolescents belonging to this group should report more acculturation-related hassles. The Realists' pattern of bonds to both cultural contexts should relate to perceiving both the challenges and opportunities of immigration simultaneously. This should result in levels of acculturation-related hassles situated between the rather extreme experiences of Idealists and Skeptics.

With regard to changes over time, acculturation-related hassles have been reported to decrease (e.g., Titzmann, Silbereisen, & Mesch, 2014). We expected that subgroups would deviate from this average trend according to their respective changes in cultural identification: We expected Idealists' expectations about their own acculturation process to become more realistic over time and their cultural identification pattern to change accordingly. Thus, we

expected that the perceived acculturation-related hassles in this subgroup would decrease less over time than the average trend would predict, or that their hassles might even increase.

Accordingly, among Skeptics, we expected to find a more pronounced decrease in acculturation-related hassles over time. Realists, we expected, would more or less follow the average trend, as their initial perceptions were comparatively realistic and thus they should experience over time the lowest pressure to adapt their mindset. In sum, we expected Idealists to perceive comparatively low and slowly decreasing language hassles (H6) and socio-cultural adaptation hassles (H7), Skeptics to perceive high and strongly decreasing hassles, and Realists to perceive medium level and averagely decreasing hassles.

With respect to perceived acculturation expectations, we initially expected Idealists to perceive the highest level of natives' expectations to engage in contacts with native Germans, Skeptics the lowest, and Realists a medium level (H8), as these perceptions match the subgroups' identification with the host culture. Moreover, we assumed Idealists would perceive the lowest level of natives' expectations to engage in contacts with ethnic German diaspora immigrants, Skeptics to perceive the highest, and Realists to perceive a medium level (H9). Regarding changes over time, we are not aware of studies investigating changes in perceived acculturation expectations. However, we may predict based on theories on intergroup relations (Tajfel & Turner, 1986; Turner et al., 1987) that Idealists would perceive the strongest pressure to decrease their perceived expectations to get in contact with natives due to their decrease in host-culture identification. In turn, Skeptics, we expected, would experience almost no decrease or even an increase in perceived acculturation expectations regarding the host culture, and that Realists would be found in between (H8). With respect to perceived acculturation expectations regarding the heritage culture, we expected Idealists to show the lowest decrease or even an increase in this perception over time, Skeptics to show the strongest decrease over time, and Realists again to be found in between (H9).

Methods

Sample

Analyses were based on a longitudinal study on adolescent immigrants to Germany and Israel, which also referred to the situation of ethnic German diaspora immigrants living in Germany. Sampling was based on the region and the population of the town (i.e., cities with a population of 100.000 to 200.000, which varied considerably in the share of immigrants) as well as on adolescents' length of residence in Germany, the school type, and their ages. Adolescents were approached via schools in 2002 and contacted again during three following annual waves via postal questionnaires. Adolescents only took part in the study when parents did not object to their participation.

In the following analyses, we focused on first generation ethnic German diaspora immigrants from Russia aged between 11 and 21 years at the first wave of assessment, who had at least one valid entry on the outcome variables identification with being 'German' and with being 'Russian'. These criteria resulted in a final sample of 366 adolescents. At the first wave of assessment, adolescents were on average 16 years old ($M = 16.0$, $SD = 2.2$ years), had immigrated to Germany about seven years before their study participation ($M = 6.7$, $SD = 3.8$ years), and had lived in nine different cities in four federal states of Germany. Slightly more than half of the sample were female (59%). Participants attended 42 different schools, with 19% in the lowest (Hauptschule) school track of secondary education, 27% in the intermediate track (Realschule), and 18% in the highest track (Gymnasium). This distribution across different school types reflects the fact that immigrants are overrepresented in the lower school tracks of Germany's educational system as compared to natives (German Federal Government Commissioner for Migration, Refugees, and Integration, 2010). An additional 21% attended comprehensive schools (Gesamtschule), 12% attended vocational schools (Berufsschule), and the remaining 3% either attended other types of schooling or did not report the type of school. Of the $N = 366$ adolescents, 85 (23%) had delivered data on both identification measures at all four waves of assessment, and the rest of the sample showed any

pattern of missing data that in the majority of cases (63%) was due to participants' dropping out from the study.

Measures

We used self-administered questionnaires in order to assess cultural identification and experiences with the host culture at all four waves of assessment as well as to assess pre-migration factors at the first wave. All measures were presented in German and in Russian.

Cultural Identification. We measured ethnic German adolescent immigrants' cultural identification by asking 'How do you see yourself?' Participants indicated on a 6-point scale how much they agreed or disagreed with the two statements 'I see myself as a German' and 'I see myself as a Russian.' Both items were taken from a group identification scale by Doosje, Ellemers, and Spears (1995). The label '*German*' referred to ethnic German diaspora immigrants' host culture, the label '*Russian*' to the heritage culture. On average, adolescents' identification as 'German' ranged between $M = 3.5$ and $M = 3.6$ ($SDs = 1.7$ to 1.8) and as 'Russian' between $M = 3.7$ and $M = 4.0$ ($SDs = 1.9$ to 2.0), depending on the waves of assessment. Previous empirical analyses verified that cultural identification shows a bi-dimensional structure among diaspora immigrants from Russia; therefore, identifications with being 'German' and with being 'Russian' can be deemed as independent aspects (Stoessel, Titzmann, & Silbereisen, 2012). Both measures of cultural identification were moderately negatively related (r s ranging between $r = -.36$ and $r = -.49$ within the same wave) and showed adequate reliability (test-retest correlations for 'German' ranging between $r = .50$ and $r = .71$, and for 'Russian' ranging between $r = .51$ and $r = .65$ for subsequent waves).

Pre-Migration Factors. First, we used the adolescents' reports on *Maternal Education* as an indicator for parental education. The high educational homophily typically found within close relationships (e.g., McPherson, Smith-Lovin, & Cook, 2001) suggests that mothers' educational attainment can be deemed a good indication of the family's educational background. On a scale from 0 ('did not finish secondary education') to 5 ('finished more

than one type of tertiary education'), mothers, on average, had completed vocational schools or colleges of higher education ($M = 2.4$, $SD = 1.3$). Second, we asked for the adolescents' *School Years in Russia*. On average, adolescents had spent $M = 3.4$ years ($SD = 3.5$) in institutions of primary or secondary education. Third, the adolescents reported on their *Native Language*. We recoded this information according to whether or not German was spoken as one native language (0 = non-German native language, 1 = German native language). Forty-nine adolescents (13%) reported German to be their native language, including six adolescents who indicated being bilingual. Fourth, we asked adolescents to indicate whether they had been prepared for immigration by their parents and by other persons. Based on that information, we coded that a *Preparation for Immigration* to Germany had taken place if adolescents reported having been prepared both by parents and by others (0 = no preparation, 1 = preparation). According to this criterion, sixty-nine adolescents (20%) had been prepared for immigration.

Experiences in the Host Culture. Experiences with the German host culture were measured by two indicators referring to acculturation-related hassles and two indicators for perceived acculturation expectations. The first indicator for hassles referred to *Language Hassles*. Six items assessed negative experiences related to insufficient communication skills within the German language, as, for example: 'I felt alienated in Germany, because my language abilities are not sufficient' (Titzmann et al., 2011). Adolescents indicated on a 5-point scale from 'never' to 'more than 10 times' how often they perceived such situations in the last 12 months. The reliability of the scale was good with Cronbach's α ranging between $\alpha = .83$ and $\alpha = .90$ over the four waves of assessment. According to adolescents' reports, language hassles had occurred nearly 1 to 2 times on average ($M_s = 1.5$ to 1.9 , $SD_s = 0.7$ to 1.0).

To assess *Socio-cultural Adaptation Hassles*, adolescents rated seven items on a 5-point scale ranging from 1 ('never') to 5 ('more than 10 times') regarding how often they

experienced situations such as ‘I was together with natives and did not know how to behave’ or ‘I realized that I don’t belong to Germany’ during the last 12 months (Titzmann et al., 2010). The scale showed good reliability with an alpha consistency varying between .79 and .86, depending on the wave of assessment. On average, adolescents reported to have experienced socio-cultural adaptation hassles nearly 1 to 2 times ($M_s = 1.7$ to 1.9 , $SD_s = 0.8$ to 0.9).

Perceived Acculturation Expectations Regarding Host Culture referred to immigrants’ perceptions of native Germans’ expectations regarding immigrants’ acculturation into the host culture. Three items asked for the degree that the respondents perceived natives’ wanting them to get in contact with the native population. Participants indicated on a 6-point scale how much they agreed or disagreed with the statements: ‘Local Germans would prefer me to spend my time with local Germans’; ‘Local Germans would prefer me to have a boy-/girlfriend who is a local German (romantic relationship)’; and ‘Local Germans would prefer me to have friends that are local Germans.’ Items were adapted from an acculturation scale by Ryder, Alden, and Paulhus (2000). Reliability was shown to be good ($\alpha_s = .85$ to $.92$). Adolescents reported, on average, around the theoretical mid-point of the scale for their perceived acculturation expectations regarding the host culture with $M_s = 3.2$ to 3.7 ($SD_s = 1.5$ to 1.6).

Similarly, *Perceived Acculturation Expectations Regarding Heritage Culture* assessed to what degree the respondents perceived native Germans’ wanting the respondents to have contact to members of the ethnic German diaspora immigrant group. The three items we used resembled those for measuring expectations regarding host culture acculturation, but now referred to ethnic German diaspora immigrants. Reliability was shown to be good with $\alpha_s = .84$ to $.91$. On average, adolescents perceived acculturation expectations regarding the heritage culture around the scale midpoint with $M_s = 3.0$ to 3.9 ($SD_s = 1.5$ to 1.6).

Results

Subgroups of Cultural Identification Change

In order to address our first research question, which referred to the existence of subgroups differing in level and change of adolescent immigrants' host- and heritage-culture identification (H1), we applied growth mixture modeling (Muthén & Shedden, 1999). The starting point for this analysis was a dual process growth curve model of cultural identification based on the indicators for identification with being 'German' and with being 'Russian' measured over the four waves of assessment, T1 to T4 (i.e., all other variables were not part of the model at this point of analysis). Growth curve models use longitudinal data for estimating variables' intercepts and slopes that can be interpreted as individuals' initial level and rate of change over time. As we had no assumption about the shape of changes over the 3-year period covered by our study, we applied unconditional growth curve modeling that allowed for the free estimation of the shape of change, thus also covering nonlinear types. This was done by fixing factor loadings of T1 manifest variables on latent slope variables to 0, and those of T2 manifest variables on latent slopes to 1, so that estimates for slopes referred to change between the first and second waves. Factor loadings for T3 and T4 were freely estimated. Missing data points were handled by full information maximum likelihood estimation (FIML), as is frequently recommended for structural equation modeling (e.g., Enders, 2006; Schafer & Graham, 2002). We used the estimator MLR as it yields robust estimations, standard errors, and fit statistics in small and medium size samples in spite of possible deviations from the normality assumption (Muthén & Asparouhov, 2002).

The initial growth mixture model included only one class of individuals and thus represented a sample-averaged model. In the subsequent steps of calculation, we added one additional class k at a time to the model. In growth mixture models, classes are defined by class-specific intercepts and slopes whereat individual variation within classes around the class-specific trajectory is allowed (i.e., adolescents pertaining to one subgroup of identification change may differ to some degree from other members of the same subgroup

with regard to level and change of identification with being ‘German’ and ‘Russian’). The variance-covariance structure of intercepts and slopes as well as the residual variances of the identification measures were held equally across classes. Then we compared whether the more parsimonious $k-1$ model described the data equally as well as the more complex k class model. To decide on the number of classes that were needed to describe a sample in an adequate and at the same time parsimonious way, we used the Bayesian Information Criterion (BIC; G. Schwartz, 1978) and the Lo-Mendell-Rubin likelihood ratio test (LMR; Lo, Mendell, & Rubin, 2001). Both have been shown to yield reliable results (Nylund, Asparouhov, & Muthén, 2007). Moreover, we referred to an entropy value in order to describe the classification quality of a given model. According to these criteria, a well-fitting and parsimonious model is indicated by a lower BIC value than the $k-1$ class model, a significant LMR result as well as by a high classification quality.

//Insert Table 1 about here//

As shown in Table 1, a 2-class model divided the $N = 366$ individuals in classes of $n_1 = 210$ and $n_2 = 156$ individuals, respectively. The direct comparison of the 1- and the 2-class model revealed a comparatively lower fit of the 1-class solution: The BIC was lower in the 2-class solution and the LMR reached statistical significance at the $p = .001$ level. The 3-class model fitted the data comparatively better: The BIC value was lower than in the 2-class model, the LMR reached statistical significance at the $p = .001$ level, and the classification quality was very good. Adding a fourth class to the model did not further contribute to the improvement of fit between the model and the empirical data: The BIC remained essentially unchanged; the LMR was still significant but now at the $p = .05$ level; and the classification quality was found to be worse than in the 3-class model. Therefore, we decided on the 3-class solution because it best describes the heterogeneity in adolescent ethnic German immigrants’ cultural identification.

Since not all participants completed the questionnaires at all time points, we applied the standard missing-at-random assumption (MAR) and used FIML for handling missing data. However, this procedure is based on the assumption that the occurrence of missing data is unrelated to variables of interest (e.g., dropout is not related to adolescents' values on heritage culture identification). Thus, we tested in a next step whether our three-group solution was biased by the patterning of missing data. We followed recommendations from the literature (Enders, 2011; Muthén, Asparouhov, Hunter, & Leuchter, 2011) and examined several growth mixture models that assume that missing data did not occur at random (MNAR). These models do not only estimate classes of identification change but additionally model the amount and pattern of missing data. Without any exception, these MNAR-models supported the MAR-based results we presented above.¹ These results suggest that results of growth mixture modeling were not sensitive to our way of handling missing data.

The final 3-class solution assigned $n_1 = 104$ individuals to Class 1, $n_2 = 169$ to Class 2, and $n_3 = 93$ individuals to Class 3. For each of the three classes, the model estimated means of levels and slopes for the identification with being 'German' and 'Russian' that define the prototypical mean growth curves of that specific class. The prototypical trajectories are illustrated in Figure 1: Class 1 was defined by a high and stable identification with being 'German' ($M_{\text{intercept}} = 4.68, p < .001; M_{\text{slope}} = -.22, \text{n.s.}$) and a low, but increasing identification with being 'Russian' ($M_{\text{intercept}} = 1.39, p < .001; M_{\text{slope}} = .92, p < .001$). Class 2 can be described by a low and stable identification with being 'German' ($M_{\text{intercept}} = 2.81, p < .001; M_{\text{slope}} = .12, \text{n.s.}$) and a high, but decreasing identification with being 'Russian' ($M_{\text{intercept}} = 5.73, p < .001; M_{\text{slope}} = -.92, p < .001$). In Class 3, individuals show medium level and stable identification with both identifications, with being 'German' ($M_{\text{intercept}} = 3.91, p < .001; M_{\text{slope}} = -.13, \text{n.s.}$) and with being 'Russian' ($M_{\text{intercept}} = 3.47, p < .001; M_{\text{slope}} = .01, \text{n.s.}$).

//Insert Figure 1 about here//

These results predominantly were in line with H1, as we found the expected three subgroups differing in level and change of cultural identification among adolescent immigrants. However, some characteristics of the three classes identified in the data differed from our expectations: Class 1 showed the expected characteristics of the Idealists subgroup with their high identification with being ‘German’ and low, but increasing identification with being ‘Russian’. Only, the ‘German’ identification did not show the expected decrease over time. The features of Class 2 with high, but decreasing identification as ‘Russian’ and low identification with being ‘German’ were in accordance with the expectations for the subgroup Skeptics. However, we found no evidence for the predicted increase of ‘German’ identification in this subgroup. Finally, Class 3 was consistent with expectations for the subgroup of Realists, however, the levels of identification were around the scale midpoint and not as high as expected.

Post-hoc comparisons of confidence intervals revealed significant differences between classes with respect to intercept and slope estimates: Idealists reported higher identification as ‘German’ (95% CI: 4.38, 4.98) than Realists (95% CI: 3.63, 4.19), who in turn were higher in identifying with the German host culture than Skeptics (95% CI: 2.51, 3.10). Skeptics were higher in identifying with the Russian heritage culture (95% CI: 5.66, 5.80) than Realists (95% CI: 3.36, 3.59), who in turn showed higher identification as being ‘Russian’ than Idealists (95% CI: 1.28, 1.49). Moreover, change in ‘Russian’ identification differed between the three classes, as on average Idealists showed an increase (95% CI: .52, 1.32), Realists remained stable (95% CI: -.31, .32), and Skeptics decreased over time (95% CI: -1.22, -.61). There were no significant differences between classes with respect to change of ‘German’ identification.

Subgroups’ Pre-Migration Situation

In a second step of the analysis, we tested, by means of a MANOVA, whether the three subgroups of identification-change differed in their pre-migration situation (H2 to H5).

Due to the listwise-deletion procedure in MANOVA, the sample size dropped slightly to $N = 322$ ($N_{\text{Idealists}} = 90$, $N_{\text{Skeptics}} = 149$, $N_{\text{Realists}} = 83$). Including gender, age, and length of residence in Germany as control variables, accounting for possible differences of subgroups with regard to these primary demographic characteristics did not alter results. Therefore, we report results without controls in the following: The MANOVA revealed a significant multivariate main effect for the subgroups, Wilks' Lambda $\Lambda = .91$, $F(8, 632) = 3.85$, $p < .001$, $\eta^2 = .05$. Given the significance of the overall test, the univariate main effects of indicators for the pre-migration situation were examined.

We found no significant effect with regard to school years in Russia ($p = .87$; $M_{\text{Idealists}} = 3.61$, $M_{\text{Skeptics}} = 3.38$, $M_{\text{Realists}} = 3.53$); thus, H2 was not supported by the data. Results revealed a significant effect for native language, $F(2, 319) = 7.91$, $p < .001$, partial $\eta^2 = .05$. Pairwise comparisons showed that the share of adolescents speaking German as a native language was highest among Idealists (22.2%) and among Realists (15.7%) who did not differ from one another ($p = .19$). Skeptics showed a significantly lower share of German native speakers (5.4%; $p < .001$ and $p < .05$, respectively). These findings were fully in line with H3. A significant main effect for the subgroups was also found for maternal education, $F(2, 319) = 5.14$, $p < .01$, partial $\eta^2 = .03$, but results were only partly in line with H4. As expected, the average level of maternal education was highest among Idealists ($M = 2.76$) and significantly lower among Skeptics ($M = 2.37$; $p < .05$); unexpectedly, however, Realists also differed significantly from the Idealist subgroup ($p < .01$) and showed a rather low level of maternal education ($M = 2.13$), which did not differ significantly from the level of Skeptics ($p = .19$). We found no significant effect with regard to preparation for immigration to Germany ($p = .33$: Idealists: 25.6%, Skeptics: 18.1%, Realists: 18.1%); therefore, H5 was not supported by our data.

Subgroups' Host-Culture Experiences

In a third and final step of analysis, we tested whether subgroups of identification-change differed in their current experiences with the host culture and its members (H6 to H9). The four outcomes (i.e., language hassles, sociocultural hassles, perceived acculturation expectations regarding host culture, and perceived acculturation expectations regarding heritage culture) were represented by auto-regressive models built on the respective manifest scale indicators measured over the four waves of assessment. Indicators measured at the same wave were allowed to correlate in order to account for shared measurement variance. Again, missing data points were handled by FIML and we used the estimator MLR (Muthén & Asparouhov, 2002) in order to deal with variables' possible deviation from the normality assumption. Outcomes at the first (T1) and at the fourth wave of assessment (T4) were predicted by adolescents' subgroup membership. This analytical model showed an adequate fit to the data, $\chi^2(329, N = 28) = 67.50, p < .001, CFI = .972, RMSEA = .062$. Again, including gender, age, and length of residence as further predictors did not affect results; therefore, we report results without controls.

Adolescents' membership in subgroups of identification-change was represented by weighted-effects codes (e.g., Cohen, Cohen, West, & Aiken, 2003) that allow for comparisons of group-specific estimates to sample-aggregated scores. The sample-aggregated scores, which are presented in Figure 2, refer to the full sample without accounting for the subgroups' existence. Significant relations between subgroup coding and outcomes' T1-scores indicate that a specific group does deviate from the aggregated sample with regard to the level of this outcome. Significant relations between subgroup coding and T4-scores, however, point to deviations from the aggregated sample with respect to changes over time once level differences are controlled for (i.e., subgroups show less or more increase/decrease over time than would be expected from the scores of the full sample). We first used Realists as the base group, as this analysis provides comparisons between Idealists and Skeptics on one hand and

the aggregated-sample scores on the other. In the next step, we defined Idealists as the base group in order to refer to the comparison between Realists and the aggregated-sample scores.

//Insert Figure 2 about here//

Regarding language hassles, results indicated that none of the subgroups differed significantly from the aggregated sample with regard to levels (Idealists: $B = -.15, p = .07$; Skeptics: $B = .07, p = .20$; Realists: $B = .03, p = .74$). A repeated measures ANOVA revealed that in the aggregated sample, language hassles at T4 were on average significantly lower than at T1 ($p < .001$; see Figure 2). The prediction of the T4 score of language hassles by subgroup (controlled for earlier levels) revealed subgroup differences with regard to changes: Idealists deviated negatively from the aggregated sample and thus showed a stronger decrease in language hassles over time ($B = -.13, p < .05$); Skeptics followed the change found for the aggregated sample ($B = .00, p = .92$); and Realists decreased less ($B = .15, p < .05$). These findings were not in line with H6 where we expected to find level differences between subgroups as well as less decrease among Idealists and a comparatively pronounced decrease over time for Skeptics.

With regard to socio-cultural adaptation hassles, Idealists showed a comparably low level ($B = -.19, p < .01$), Skeptics a high level ($B = .13, p < .01$), and Realists did not differ from the aggregated sample with regard to the level of socio-cultural adaptation hassles ($B = -.03, p = .72$). A repeated measures ANOVA indicated a decrease in socio-cultural adaptation from T1 to T4 ($p < .05$; see Figure 2). In comparison to this decrease in the aggregated sample, Idealists decreased more ($B = -.16, p < .01$), Skeptics followed the decrease of the aggregated sample ($B = .00, p = 1.00$), and Realists decreased less ($B = .18, p < .05$). Thus, results on socio-cultural adaptation hassles were in line with H7 with respect to levels. With regard to changes over time, however, findings were not in line with expectations as we had expected to find less decrease for Idealists and the strongest decrease for Skeptics.

Referring to perceived acculturation expectations regarding the host culture, Idealists showed a level that did not differ from the aggregate sample mean ($B = .11, p = .41$), whereas Skeptics scored lower ($B = -.21, p < .05$) and Realists higher ($B = .28, p < .05$). A repeated measures ANOVA indicated a significant decrease from T1 to T4 for the aggregated sample ($p < .001$). Idealists followed this decrease over time ($B = .28, p = .24$), Skeptics showed a significantly stronger decrease ($B = -.32, p < .05$), and Realists again followed the decrease found for the aggregated sample ($B = .29, p = .08$). Findings were in line with H8 with the exceptions that Realists (and not only Idealists) were found to show a comparatively high level of expectations to relate with natives, and Idealists (and not only Realists) followed the average decrease over time.

With regard to perceived acculturation expectations regarding the heritage culture, Idealists perceived lower levels of expectations to socialize with other ethnic German diaspora immigrants than the aggregated sample ($B = -.52, p < .001$), Skeptics perceived higher levels ($B = .40, p < .001$), and Realists were found in between ($B = -.17, p = .18$). Results of a repeated measures ANOVA indicated that perceived acculturation expectations regarding heritage culture decreased significantly from T1 to T4 in the aggregated sample ($p < .001$). This decrease was the same for all subgroups, as neither Idealists ($B = -.02, p = .92$), Skeptics ($B = -.07, p = .55$), nor Realists ($B = .15, p = .37$) differed from the aggregated sample with respect to changes over time. Findings for levels, but not for changes, resembled our expectations from H9.

Discussion

The aim of this study was to differentiate subgroups on the basis of change in cultural identification among first generation adolescent ethnic German diaspora immigrants, to predict subgroup membership by immigrants' pre-migration situation, and to test whether group membership was associated with adolescent immigrants' current experiences in the host culture. Three subgroups were identified: Idealists, Skeptics, and Realists. Idealists showed a

pattern of comparably high and stable identification as ‘German’ and low, but increasing identification as ‘Russian’; Skeptics reported a low and stable identification as ‘German’ and a high, but decreasing identification as ‘Russian’; and Realists were marked by medium-level and stable identification with both host and heritage culture. Analyses revealed differences between subgroups in terms of their pre-migration situation with respect to native language and maternal education and in terms of their current experiences with respect to language and socio-cultural adaptation hassles as well as to perceived expectations of natives regarding immigrants’ contacts with host and heritage culture members.

Subgroups of Cultural Identification Change and Immigrants’ Pre-Migration Situation

As in recent studies (Huang & Stormshak, 2011; Matsunaga et al., 2010; S. J. Schwartz et al., 2013), we identified meaningful subgroups among adolescent immigrants showing distinct longitudinal patterns of acculturation. At first glance, these subgroups may be seen as reflections of immigrants’ acculturation strategies (Berry, 1997) that describe the degree to which host-culture acquisition and heritage-culture retention are chosen. In this terminology, Idealists would represent the assimilation strategy and Skeptics the separation strategy. Integration (i.e., high levels of both host-culture acquisition and heritage-culture retention) and marginalization (i.e., low levels of both) were, however, not found in the current study. Instead another group, the Realists, reported medium levels on both dimensions of cultural identification. We cannot say whether these subgroups are representative of the specific immigrant group investigated (i.e., ethnic German diaspora immigrants) or the variables studied (cultural identification); this needs further research. But the major difference to Berry’s typology is the time dimension: Acculturation strategies are rather stable constructs describing four prototypical ways of how immigrants may deal with host and heritage cultures at one particular point in time. Potential changes in cultural affiliations and information on predictors and consequences of such changes are not part of the conception of acculturation strategies that Berry defined. Our results revealed significant changes in cultural identification

in two out of three groups and, moreover, identified pre-migration factors as possible predictors and experiences in the host culture as possible consequences of such changes. This underscores that the time dimension is required in empirical studies on acculturation and that immigration has to be seen as a process that starts long before an actual immigration to a new country.

The subgroups identified seemed to change towards a medium-level identification with the heritage culture. The rather extreme groups of Idealists and Skeptics started at $M_s = 1.39$ and 5.73 , respectively, and were measured at $M_s = 2.53$ and 4.59 three years later, and Realists remained stable at a medium-level ($M_s = 3.47$ and 3.48 , respectively). ‘German’ identification was found to be rather stable for all subgroups and to vary around the scale-midpoint, again between the rather extreme subgroups Idealists (T4: $M = 4.30$) and Skeptics (T4: $M = 3.02$). These results seem to contradict the description of Germany’s immigration ideology as being ‘ethnist’ because of their supporting diaspora immigration, while expecting immigrants to adopt the public values of the host culture and to neglect their heritage cultural background (Bourhis, Moïse, Perreault, & Senécal, 1997). Such an immigration ideology would expect very high host-culture and rather low heritage-culture identification. However, this official ideology is contradicted by experiences of immigrants’ feeling that they are not being accepted (Dietz, 2003) and that they are being treated as ‘Russian’ (Silbereisen, 2008). These experiences may prevent immigrants from developing a strong sense of being ‘German’ and may instead encourage them to keep some bonds to their Russian heritage culture. In combination, the ‘ethnist’ immigration ideology and the immigrants’ feeling of being excluded by the native population may explain why we found changes in heritage cultural identification towards medium levels and a stable, medium-level host-culture identification.

Our study showed that subgroups already differed before the actual immigration took place. Speaking German as a native language (i.e., already in the heritage country) increased

the likelihood of the adolescents' belonging to the Idealist or to the Realist subgroup. In turn, not speaking German as a native language was most likely for Skeptics. Only a minority of ethnic German families living in the diaspora retained the German culture due to their long history of residence in Russia and high intermarriage rates (Dietz, 2000; German Federal Office for Migration and Refugees, 2007). Accordingly, only 13% of the adolescents in our study indicated that German was their native language. Thus, a person's having learned German as a native language can be taken as an indication that families actively preserved their German cultural roots, which seemed to support adolescents' identification with the German host culture and their high expectations of smooth adaptation to Germany later on. Similar results can be found in other diaspora immigrant groups. For example, adolescent Russian immigrants to Israel stemming from ethnically homogenous Jewish families had a more positive attitude towards the host culture as compared to immigrants from ethnically mixed families (Tartakovsky, 2009). The fact that native language had clear effects, whereas we found no effect for school years in Russia, suggests that variations in feelings of cultural belonging were mainly transmitted through the family context and not so much shaped by public institutions, such as schools.

Maternal education, the third pre-migration factor, also related to membership in the subgroups of cultural identification. Educational degrees obtained in the heritage culture have been shown to be considerably devalued after immigration to Germany (Kogan, 2011). However, higher education has been argued to relate to better adaptational outcomes not only because of its being a personal resource in itself, but also because it eases pre-acculturation into the new cultural context (Berry, 1997). Accordingly, the highest parental education was found in the subgroup with the highest 'German' identification (Idealists). The fact that adolescents' preparation for immigration did not relate to membership in subgroups differing in change in cultural identification may be due to the kind of preparation parents and others provided. This preparation may refer to a large number of issues and be based on a variety of

measures, which may not necessarily relate to cultural identification. In fact, previous research has demonstrated that structured preparation programs may have positive effects on adolescent diaspora immigrants' future adaptation in the host culture (Mirsky, 2001). Future research may profit from a more differentiated view on different kinds of preparation.

Taken together, our findings are in line with theoretical assumptions (e.g., Berry, 1997) and with empirical results (e.g., Jasinskaja-Lahti & Yijälä, 2011; Tartakovsky, 2009) suggesting that individuals' pre-migration situations influence the later course of their acculturation process. Due to differences in native language and maternal education, adolescents started on different levels of self-ascribed cultural belonging and showed different changes over time. These changes mainly reflected an adaptation of overly high or low identification with the heritage culture.

Subgroups' Perceived Experiences with the Host Culture

Besides the identification of pre-migration predictors for subgroup membership, our results demonstrate that members of different cultural identification subgroups report different experiences with the host culture and its members. Idealists were characterized by comparatively low language and social-cultural adaptation hassles as well as by perceiving low expectations to engage in contacts with their own immigrant group. Skeptics, on the contrary, reported higher social-cultural adaptation hassles and perceived expectations to relate primarily with other immigrants, but less with natives. Realists were characterized by comparatively high language and socio-cultural adaptation hassles, while perceiving more expectations by natives to get in contact with natives.

That Idealists reported fewer language and fewer socio-cultural adaptation hassles, which findings should be related to the fact that in this subgroup we found both a high share of native speakers and a high level of maternal education. Pre-acculturation into the host culture as indicated by having learned German as native language within the family context should reduce adolescents' cultural gap to the native population even prior to immigration. A

higher educational background should further facilitate the adaptation process after immigration, resulting in lower levels of acculturation-related hassles and the perception of contact opportunities with natives. Skeptics, as the group with both a low share of native speakers and low maternal education, in turn, showed an opposite pattern of acculturation-related hassles and perceived acculturation expectations. Moreover, changes over time were not similar for all subgroups (with the only exception of perceived acculturation expectations regarding the heritage culture). Although we did not expect this finding, our data suggest that some of the aforementioned differences become even more pronounced over time. Thus, pre-migration variables not only define immigrants' starting conditions in the acculturation process, but may also be associated with change processes taking place after immigration, both in terms of adolescent immigrants' identification change and changes in acculturation-related experiences with the host culture and its members.

Our results may inform interventions aiming at supporting a successful adaptation process in several ways. Combining host and heritage identifications (e.g., Sam, Vedder, Ward, & Horenczyk, 2006), perceiving few hassles (e.g., Titzmann et al., 2014), and experiencing supportive acculturation expectations (e.g., Zagefka & Brown, 2002) have been shown to relate to better outcomes in the acculturation process. Skeptics were clearly not characterized by these attributes so that already in the pre-migration stage, steps should be taken to support those adolescents; otherwise, they seem to be at risk of showing this specific identification pattern later on. For example, courses familiarizing immigrants with language, values, and other types of cultural knowledge, and taking place prior to immigration may help to reduce the cultural gap to the native population. In addition, factors need to be identified that would counter the effects of low parental education. To some extent, these suggestions also refer to Realists who also reported a substantial amount of hassles. Idealists, on the contrary, perceived the lowest levels of hassles during the acculturation process, which is promising at the first glance. However, it needs to be investigated whether these adolescents'

strong identification with the host culture comes at a price in other domains of life, for example the deterioration of family relations due to parents' slower adaptation to the new cultural setting (Fillmore, 2000).

Limitations and Conclusion

Despite the strengths of our research, among them the longitudinal design with four annual waves of assessment, the usage of a person-oriented approach for simultaneously analyzing patterns of acculturation-related changes on two dimensions, and the consideration of immigrants' pre-migration situation, some limitations need to be discussed. A first limitation is related to the assessment of cultural identification. We only used single-item indicators due to limited assessment time per wave. Nevertheless, indicators of host and heritage culture identification showed adequate test-retest reliability and yielded meaningful results, including results on intra-individual changes. Moreover, our measure of cultural identification was limited to the cognitive aspect of identification whereas other aspects, such as the value and emotional significance attached to cultural group memberships, were not covered by this study. (For different definitions, see Ashmore, Deaux, & McLaughlin-Volpe, 2004; Phinney & Ong, 2007).

Second, our analysis of pre-migration factors was limited to those indicators that immigrants who came as children or adolescents and who on average spent about seven years in the host culture can be expected to report without major biases. Thus, our approach limited the analysis to retrospective measures of rather hard-fact indicators. Future studies may widen the focus by additionally taking psychological factors situated in individuals' pre-migration situation into account (such as identification with the future host culture). However, for measuring directly both the pre-migration situation in the heritage culture and the acculturation processes in the host culture, one would need to recruit participants before immigration (see Tartakovsky, 2009) and to cover sufficient time intervals after immigration.

Third, statements on whether cultural identification precedes immigrants' experiences with the host culture or whether temporal and causal relations are in the opposite direction are limited by the design of our study. The fact that we showed subgroups of cultural identification change to be related to changes in acculturation-related hassles and perceived acculturation expectations is consistent with the assumption that identification with a social group relates to a more positive perception of this group and its members and to more negative perception of out-group members (Tajfel & Turner, 1986; Turner et al., 1987). Nevertheless, bidirectional effects are also plausible. Investigating causal directions would require variable-centered approaches embedded in experimental designs in which one of these variables could be manipulated in order to compare the effects between intervention and control groups.

Fourth, the special case of diaspora immigrants analyzed in our study may raise questions regarding the generalizability of our findings. At first glance, the privileged immigration conditions of diaspora migrants suggest that our findings should be only carefully applied to other immigrant samples. However, the vast majority of ethnic German diaspora immigrants was well adjusted to the heritage culture and consequently most adolescents did not speak German as a native language (Dietz, 2000; German Federal Office for Migration and Refugees, 2007). Accordingly, these diaspora immigrants face similar acculturation-related challenges as other immigrant groups (Silbereisen, 2008). It thus remains an empirical question whether similar subgroups regarding change in cultural identification can be found in other groups of voluntary immigrants and whether the number or size of subgroups differs in other immigrant populations.

Fifth, we had a considerable share of missing data points that was mainly due to dropout from the 3-years longitudinal study. We addressed this issue by handling missing data points by full information maximum likelihood estimation as is recommended for structural equation modeling (e.g., Enders, 2006; Schafer & Graham, 2002). More importantly, we

showed in additional analyses (see Enders, 2011; Muthén et al., 2011) that results on subgroups of identification change can be supposed to be unbiased by the presence and the patterning of missing points in our data set. We therefore assume that our results are robust.

Despite the limitations just mentioned, our study points to the existence of distinct subgroups of cultural identification and their changes during acculturation among ethnic German adolescents. Furthermore, membership in these groups was, at least partly, related to pre-migration factors, more specifically to native language and maternal education. Over time, some of these subgroups changed in heritage cultural identification, and groups tended to combine both cultural belongings over time, although cultural bonds to host and heritage cultures were not exceptionally strong. In addition, the three subgroups differed significantly in how they perceived their situation in Germany. Especially those adolescents who already had closer contact to the German culture before their immigration experienced fewer hassles and more contact opportunities with natives. Intervention programs may be particularly useful for those adolescents who had fewer opportunities for pre-acculturation into the future host culture. Such programs could be based on culture and language courses in order to reduce the cultural gap between those adolescent immigrants and the host culture's adolescents and may also help to increase adolescents' awareness of their belonging to both cultural contexts. Such targeted programs may help to further support the already-quite-successful acculturation process of ethnic German adolescents in Germany.

Footnotes

¹ Specifically, we applied conventional, Roy latent dropout, and Muthén-Roy pattern-mixture modeling as described by Muthén and colleagues (Muthén et al., 2011). All these models suggested a 3-class solution; characteristics of subgroups were comparable to those of the MAR-solution; at most, the deviation with regard to the assignment of individuals to a specific class was $N = 2$. We did not apply selection modeling as our data did not meet the central assumptions of these models due to the discrete measurement of cultural identification in our study (see Enders, 2011).

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Table 1

Fit Indexes, Entropy and Size of Classes of the Growth Mixture Models

Model	BIC	LMR	Entropy	N_1	N_2	N_3	N_4
1-Class	6439	-	-	366	-	-	-
2-Class	6353	***	.83	210	156	-	-
3-Class	6272	***	.92	104	169	93	-
4-Class	6265	*	.87	92	125	44	105

Note. BIC = Bayesian Information Criterion; LMR = Lo-Mendell-Rubin Likelihood Test.* $p \leq .05$. *** $p < .001$.

Figure Caption

Figure 1. Trajectories of Change in Adolescent Ethnic German Immigrants' Cultural Identification (Estimates of the 3-Class Mixture Model)

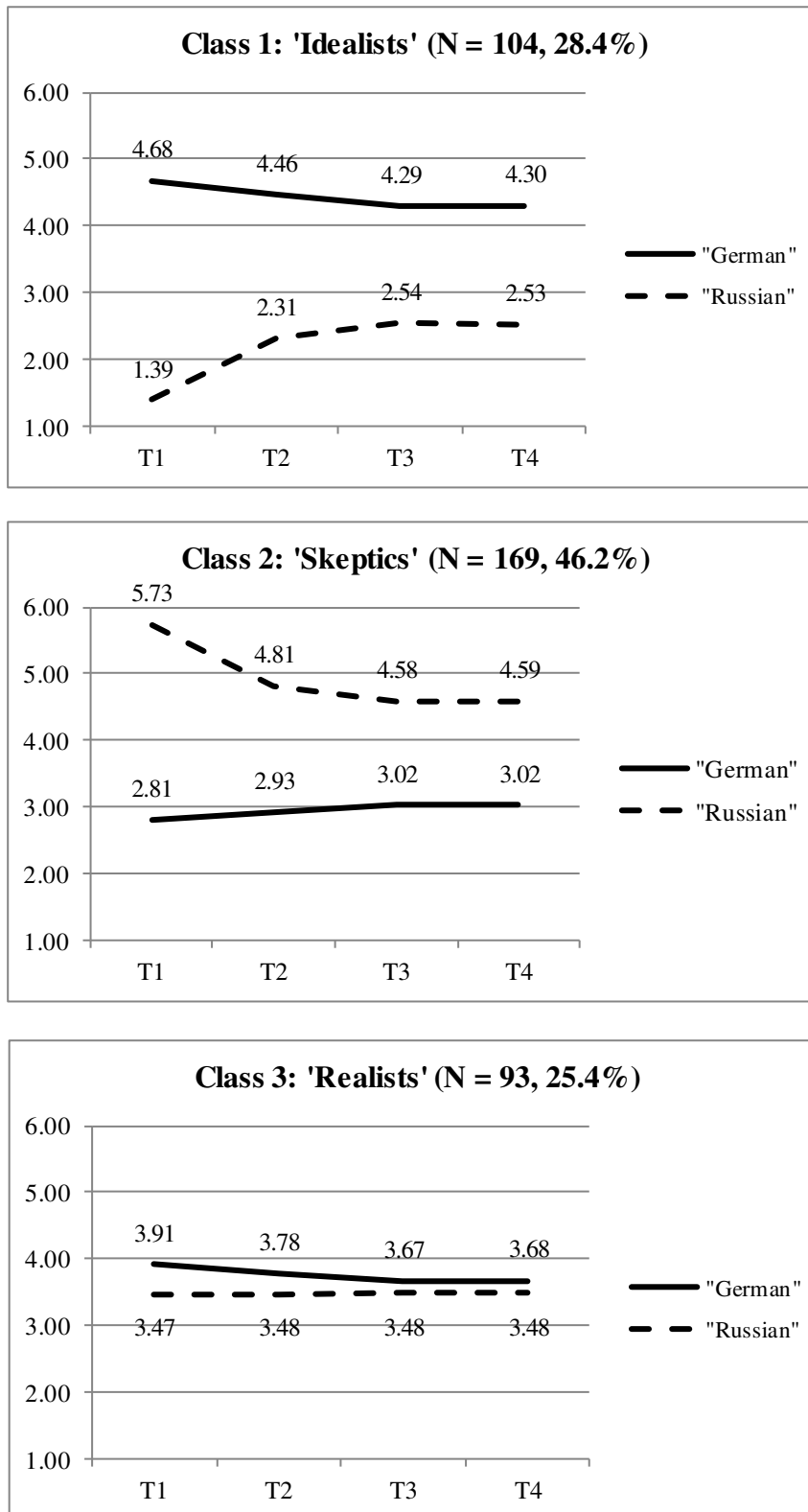


Figure 2. Experiences in the Host Culture over Four Waves of Assessment (Descriptive Results)

